

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for identifying an agent which modulates an FSH or FSH Mimetic influenced cellular process or response, the method comprising:

a) exposing a sample of cells to FSH or FSH Mimetic;
b) determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes selected from the group consisting of those set forth in SEQ ID NOS. 1-15 ~~and human genes homologous to said genes~~, in the presence and absence of a selected agent; and

c) identifying that the agent modulates an FSH or FSH Mimetic influenced cellular process or response when the expression of the one or more FSH or FSH Mimetic stimulated genes in the cell sample in the presence of the agent differs ~~by at least a two-fold increase~~ over the expression of the one or more FSH or FSH Mimetic stimulated genes in the absence of the agent.

2. (Withdrawn) A method for identifying an agent which modulates an FSH or FSH Mimetic influenced cellular process or response, the method comprising:

a) exposing a sample of cells to FSH or FSH Mimetic;
b) determining the activity in the sample of cells of the product of one or more FSH or FSH Mimetic stimulated genes (Table 1, 2, or 3) in the presence and absence of a selected agent; and

c) identifying that the agent modulates an FSH or FSH Mimetic influenced cellular process or response when the activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the cell sample in the presence of the agent differs from the activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the absence of the agent.

3. (Currently amended) A method for identifying an agent which modulates an FSH or FSH Mimetic influenced cellular process or response, the method comprising:

- a) providing a sample of cells;
- b) determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes selected from the group consisting of those set forth in SEQ ID NOS. 1-15 ~~and human genes homologous to said genes~~, in the presence and absence of a selected agent; and
- c) identifying that the agent modulates an FSH or FSH Mimetic influenced cellular process or response when the expression of the one or more FSH or FSH Mimetic stimulated genes in the cell sample in the presence of the agent differs ~~by at least a two-fold increase~~ over the expression of the one or more FSH or FSH Mimetic stimulated genes in the absence of the agent.

4. (Withdrawn) A method for identifying an agent which modulates an FSH or FSH Mimetic influenced cellular process or response, the method comprising:

- a) providing a sample of cells;
- b) determining the activity in the sample of cells of the product of one or more FSH or FSH Mimetic stimulated genes (Table 1, 2, or 3) in the presence and absence of a selected agent; and
- c) identifying that the agent modulates an FSH or FSH Mimetic influenced cellular process or response when the activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the cell sample in the presence of the agent differs from the activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the absence of the agent.

5. (Currently amended) A method for detecting or monitoring a cellular process or response that is influenced by FSH or FSH Mimetic, the method comprising:

- a) obtaining a sample of cells from a patient;

b) determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes selected from the group consisting of those set forth in SEQ ID NOS. 1-15 ~~and human genes homologous to said genes~~; and

c) identifying that the cells in the sample of cells obtained from the patient are undergoing a cellular process or response that is influenced by FSH or FSH Mimetic when the level of expression of the one or more FSH or FSH Mimetic stimulated genes in the cell sample exhibits an at least a two-fold ~~an at least a two-fold~~ increase relative to the level of expression of the one or more FSH or FSH Mimetic stimulated genes in a control the sample.

6. (Withdrawn) A method for detecting or monitoring a cellular process or response that is influenced by FSH or FSH Mimetic, the method comprising:

a) obtaining a sample of cells from a patient;

b) determining the level of activity in the sample of cells of the product of one or more FSH or FSH Mimetic stimulated genes (Tables 1, 2, 3);

c) identifying that the cells in the sample of cells obtained from the patient are undergoing a cellular process or response that is influenced by FSH or FSH Mimetic when the level of activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the cell sample is increased relative to the activity of the product of the one or more FSH or FSH Mimetic stimulated genes in a control the sample.

7. (Currently amended) A method for assessing whether cells will be responsive to an agent which modulates an FSH or FSH Mimetic influenced cellular process or response comprising the steps of

a) exposing a sample of cells obtained from a patient to a test agent;

b) determining the level of expression in the sample of cells of the one or more FSH or FSH Mimetic stimulated genes selected from the group consisting of those set forth in SEQ ID NOS. 1-15 ~~and human genes homologous to said genes~~, in the sample exposed to the agent and in a sample of cells that is not exposed to the agent; and

c) determining that the cells will be responsive to the agent when expression of the one or more of the FSH or FSH Mimetic stimulated genes exhibits an ~~at least a two-fold~~ increase in the presence of the agent relative to the expression of the one or more FSH or FSH Mimetic stimulated genes in the absence of the agent.

8. (Withdrawn) A method for assessing whether cells will be responsive to an agent which modulates an FSH or FSH Mimetic influenced cellular process or response comprising the steps of a) exposing a sample of cells obtained from a patient to a test agent; b) determining the level of activity of the product of the one or more FSH or FSH Mimetic stimulated genes (Tables 1, 2, and 3) in the sample of cells exposed to the agent and in a sample of cells that is not exposed to the agent; and c) determining that the cells will be responsive to the agent when activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the cell sample in the presence of the agent differs from the activity of the product of the one or more FSH or FSH Mimetic stimulated genes in the absence of the agent.

9. (Withdrawn) A method for modulating an FSH or FSH Mimetic influenced cellular process or response, the method comprising administering a compound which alters the expression or activity of an FSH or FSH Mimetic stimulated gene (Tables 1, 2, 3).

10. (Withdrawn) The method of claim 10 wherein said compound is a FSH or FSH Mimetic stimulated gene or the product thereof.

11. (Withdrawn) A method of treating a reproductive disorder or disease in a mammal, comprising the administration of a therapeutically effective dose of FSH or an FSH mimetic which alters the expression or activity of an FSH or FSH mimetic stimulated gene (Tables 1, 2, 3).

12. (Previously presented) The method of claim 1, wherein determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes, comprises using a solid surface on which a group of probes is immobilized, the probes consisting of one or more of the sequences set forth in SEQ ID NOS. 1-15.

13. (Previously presented) The method of claim 3, wherein determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes, comprises using a solid surface on which a group of probes is immobilized, the probes consisting of one or more of the sequences set forth in SEQ ID NOS. 1-15.

14. (Previously presented) The method of claim 5, wherein determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes, comprises using a solid surface on which a group of probes is immobilized, the probes consisting of one or more of the sequences set forth in SEQ ID NOS. 1-15.

15. (Previously presented) The method of claim 7, wherein determining the level of expression in the sample of cells of one or more FSH or FSH Mimetic stimulated genes, comprises using a solid surface on which a group of probes is immobilized, the probes consisting of one or more of the sequences set forth in SEQ ID NOS. 1-15.